IN THE CLAIMS

1. (currently amended) A method for determining an amino acid sequence motif or a peptidomimetic sequence motif containing an active site capable of being bound by a protein kinase [[an]] enzyme which catalyses ~~covalent modification~~ phosphorylation of a serine, threonine or tyrosine residue of a substrate molecule, the method comprising:[[;]]

a) contacting the enzyme with a library consisting of a number of oriented degenerate library subsets of molecules in solution, each subset comprising unmodified degenerate motif sequences each having n residues and each having a modifiable residue at a different fixed non-degenerate position, under conditions which allow for ~~modification~~ phosphorylation of molecules which are a substrate for the enzyme;

b) allowing the enzyme to ~~modify modifiable~~ phosphorylate serine, threonine or tyrosine residues in library subsets containing molecules having an active substrate site for the enzyme;

c) deconvoluting the oriented degenerate library subsets of the library, *in situ* without separating modified from unmodified molecules, so as to reveal the sequence of any motif which has been ~~modified by covalent binding of~~ phosphorylated by the enzyme;

wherein each library subset is of formula (I)

$$(Xaa)_x Zaa\ (Xaa)_y \quad (I)$$

wherein

Zaa is a non-degenerate ~~modifiable natural or unnatural~~ amino acid residue selected from the group consisting of serine, threonine and tyrosine ~~or peptidomimetic~~;

Xaa is any natural or unnatural amino acid residue or peptidomimetic;

x and y are each independently 0 or an integer;

(x + y) = (n-1); and

n = an integer from 3 to 8~~, preferably 5~~.

2. (original) A method according to claim 1 which includes the further step of synthesising a substrate molecule containing a motif sequence revealed in step (c) or an analogue of said motif sequence.

3. (original) A method according to claim 1 in which said revealed substrate molecule motif sequence, or an analogue thereof, is used to develop a selective inhibitor of said enzyme, which method includes the step of changing the modifiable residue to a derivative form of the residue which is not modifiable by the enzyme.

4. (withdrawn) An enzyme substrate molecule produced according to the method of claim 2.

5. (withdrawn) An enzyme inhibitor molecule produced according to the method of claim 3.

6. (withdrawn) A pharmaceutical composition comprising as an active ingredient a substrate molecule according to claim 2.

7. (withdrawn) A pharmaceutical composition comprising as an active ingredient an inhibitor molecule according to claim 3.

8. (withdrawn) A method of treatment which includes administering to a patient an effective amount of a substrate molecule according to claim 2 or a composition as defined above.

9. (withdrawn) A method of treatment which includes administering to a patient an effective amount of an inhibitor molecule according to claim 3 or a composition according to claim 7.

10. (original) A method according to claim 1 wherein x + y = (n-1) = 4.

Claim 11 (canceled)

12. (currently amended) A method according to claim 1 wherein Formula I further ~~may optionally~~ includes at any place in the formula ~~one or more~~ an invariant residue[[(s)]], said residue[[(s)]] being in the same relative position[[(s)]] in each subset of the library.

Claims 13-15 (canceled)

16. (withdrawn) A protein kinase inhibitor capable of inhibiting the catalytic transfer of the γ-phosphate from ATP to an amino acid residue on a substrate molecule, said inhibitor having been produced by the method of claim 1.

17. (new) A method according to claim 1 wherein n is 5.